



Problem Resolution Report



COSD Contract no. 537863

Applications Testing

HP/CoSD-099

Date: November 20, 2012

Summary:

In accordance with the provisions of the IT and Telecommunications Service Agreement by and between the County of San Diego ("County") and HP Enterprise Services, LLC ("HP" or "Contractor") (hereinafter collectively referred to as "the Parties") originally dated January 24, 2006 and restated on April 5, 2012 ("the Agreement"), agreement is reached on the date shown above.

Issue or Problem:

The existing labor categories mention very little for testing. "Unit test plan" is shown as an example of a work product in most application labor categories. The only other mention of "test" is the existence of test databases and the qualification that an Applications Architect "Thoroughly understands testing and participates in the broader levels of test planning."

There are no labor categories for the test planning, development and execution needed to ensure application quality.

Resolution:

With the addition of three new test labor categories a new independent test team with specific skill sets, training and tools will be created which will work in a separate and distinct environment from application developers. The independent test team will provide an unbiased and fresh view of the developed product, independent from the development and System's analyst team, and a higher level of quality in the final product. Please note that currently 65% of the Total Authorized Budget is used on NDWR (break/fix) across all groups. The work performed by the Test Team will significantly reduce break/fix hours, leading therefore to long term savings and IT re-investment opportunities for the County.

1. Add the following labor categories to the contract:

<u>Labor Category</u>	<u>Hourly Rate</u>
Applications Test Engineer	\$105.00/hour
Applications Test Developer	\$126.00/hour
Applications Test Lead	\$158.00/hour



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2. Exhibit 16.1-1 is hereby amended to add an RU Fee for the additional Labor Categories as shown on Attachment 1 to this PRR;
3. Exhibit 16.1-4 is hereby amended to add Section 15, 16 and 17, as per Attachment 2 to this PRR.

The resolution of the issue or Problem as described in this Problem Resolution Report shall govern the Parties' actions under the Agreement until a formal amendment of the Agreement is implemented in accordance with the terms of the Agreement, at which time this Problem Resolution Report shall be deemed superseded and shall be null and void.

All other terms and conditions of the Agreement remain unchanged and the Parties agree that such terms and conditions set forth in the Agreement shall continue to apply. Unless otherwise indicated, the terms used herein shall have the same meaning as those given in the Agreement.

IN WITNESS WHEREOF, The Parties hereto, intending to be legally bound, have executed by their authorized representatives and delivered this Problem Resolution Report as of the date first written above.

COUNTY OF SAN DIEGO

By: Winston F. McColl

Name: Winston F. McColl

Title: Director Department of Purchasing
and Contracting

Date: 11/27/2012

J. Hudson

HP ENTERPRISE SERVICES, LLC

By: Max Pinna

Name: Max Pinna

Title: Contracts Manager

Date: November 20, 2012

Attachment 2 to PRR 99 – Applications Testing

Exhibit 16.1-4, Application Services Labor Categories

15. Applications Test Engineer

Description: Application Test Engineer is responsible for implementing comprehensive test plans to support application development lifecycles, including iterative and agile methods, application upgrades and maintenance.

The Application Test Engineer must be experienced in understanding requirements, design specifications, and testing strategy to: develop test scenarios, requirements traceability matrix and develop testing metrics collection plan in order to plan and prepare for testing. The Application Test Engineer is responsible for carrying out application testing.

The Application Test Engineer has the ability to execute test cases and scripts, analyze test results, report on testing progress and results, facilitate defect resolution and document final test results in order to execute testing engagement. This job classification is proficient in testing processes and testing metrics in order to create and review test summary reports, provide testing project feedback and archive testing assets in order to verify completion of testing.

Education: This classification requires the possession of (1) a master's or equivalent university degree in management information systems or computer science with a minimum of 4 years related experience, (2) a baccalaureate or equivalent university degree in management information systems or computer science and a minimum of 6 years related experience, (3) an associate's degree with at least 8 years related experience, or (4) a high school diploma with at least 10 years related experience.

Experience: This classification must have a minimum of 2 years experience in delivering testing services.

Work Products: Examples of work products include: test plans, testing scenarios and test cases, test execution reports.

16. Applications Test Developer

Description: Application Test Developer is responsible for developing scripts and other testing tools in order to implement the comprehensive test plans developed by the Application Test Lead.

The Application Test Developer must be experienced in understanding software and environment requirements, design specifications, and testing strategies. The Application Test

Developer develops the technical tools needed to support the testing strategy. The test developer also reviews testing strategy and plans, validates requirements and specifications, develops technical test plans, develops technical test scenarios, selects test design techniques and develop testing metrics collection plan in order to plan and prepare for testing.

This labor category is experienced in testing analysis and design, functional and performance models, and test specifications to: develop models and scripts for testing, evaluate and validate test cases and scripts, validate functional models for testing, validate performance models for testing, develop and validate technical test specifications and tools, validate automated testing coverage, escalate quality issues for resolution, evaluate test automation tools and validate testing environments in order to develop test specifications and automated testing tools.

The Application Test Developer has the ability to develop test cases and scripts, analyze complex test results from the scripts, report on test tool and testing progress and results, facilitate defect resolution and document final test results in order to execute testing engagement. This job classification is proficient in testing processes, testing metrics and testing tool development.

Education: This classification requires the possession of (1) a master's or equivalent university degree in management information systems or computer science with a minimum of 4 years related experience, (2) a baccalaureate or equivalent university degree in management information systems or computer science and a minimum of 6 years related experience, (3) an associate's degree with at least 8 years related experience, or (4) a high school diploma with at least 10 years related experience.

Experience: This classification must have a minimum of 4 years experience in delivering multiple testing services to complex projects.

Work Products: Examples of work products include: test plans, complex testing scenarios, test scripts, test tools and other automated testing, test cases and test reports.

17. Applications Test Lead

Description: Application Test Lead is responsible for the leading the development and implementation of comprehensive test plans to support traditional or agile application development lifecycles.

The Application Test Lead interacts with project teams and clients to gain an understanding of the business environment, technical context, and testing objectives for a project as a basis for determining testing requirements. The test lead plans and leads the analysis of the testing requirements of a project in order to define a Testing Strategy, understands and recommends the

use of the appropriate automated testing tool and defines the metrics to be collected to monitor the performance and effectiveness of testing for a project.

This labor category is responsible for guidance relating to testing activities for a project, communicating with appropriate stakeholders for each project and managing testing issues and risks. The test lead provides consultative support on all aspects of the testing process for a project, contributes to special studies, develops and presents testing proposals, identifies and recommends improvements to methods and standards for a project through an assessment of current testing practices, and supports implementation of recommended improvements.

The Application Test Lead provides technical leadership for all testing activities of assigned projects, acts as a mentor and coach to testing specialists and test analysts, and assigns work to others on the testing team.

Education: This classification requires the possession of (1) a master's or equivalent university degree in management information systems or computer science with a minimum of 4 years related experience, (2) a baccalaureate or equivalent university degree in management information systems or computer science and a minimum of 6 years related experience, (3) an associate's degree with at least 8 years related experience, or (4) a high school diploma with at least 10 years related experience.

Experience: This classification must have a minimum of 6 years experience in delivering multiple testing services to complex projects.

Work Products: Examples of work products include: test strategies and plans, complex testing scenarios and test cases, test reports and work assignments.

Attachment 1 to PRR 099 - Application Testing

Schedule 16.1 Fees, Exhibit 16.1-1

Resource Unit	Schedule 13 Cross-Reference/Service Framework Component as	Unit of Measure	Prating	Description (specific cost detail breakdown)	Resource Unit Fee (90% to 110% band)	Baseline Volumes (per Contract Year)	(Resource Unit Fee) x (Baseline Volumes)	Bundled Resource Unit	Resource Unit Fee (70% to 80% band)	Resource Unit Fee (80% to 90% band)	Resource Unit Fee (110% to 120% band)	Resource Unit Fee (120% to 130% band)	Measurement Methodology (Specific measurement on last day of month or cumulative over three months)	Depreciation Time Period (in Years)
Applications Test Engineer	Applications Services—Section 3 (See also Exhibit 16.1-4)	Hour	Hourly Labor Rate	None	\$ 105.00		0	N/A	N/A	N/A	N/A	N/A	Cumulative	N/A
Applications Test Developer	Applications Services—Section 3 (See also Exhibit 16.1-4)	Hour	Hourly Labor Rate	None	\$ 126.00		0	N/A	N/A	N/A	N/A	N/A	Cumulative	N/A
Applications Test Lead	Applications Services—Section 3 (See also Exhibit 16.1-4)	Hour	Hourly Labor Rate	None	\$ 138.00		0	N/A	N/A	N/A	N/A	N/A	Cumulative	N/A